

LAINDON SERVICE STATION

Phase One Environmental Assessment

Prepared for: Motor Fuel Group Ltd

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1.0 Introduction

1.1 Background

In February 2022, SLR Consulting Limited (SLR) was commissioned by Motor Fuel Group Limited (MFG) to undertake a Phase One (desk study) environmental assessment of Laindon Service Station, Southend Arterial Road, Basildon, Essex, SS15 6DP (the site). SLR's assessment was requested to support a planning application for redevelopment of the site.

The site location is shown on Drawing 01 and Drawing 02 shows the current site layout. A proposed development plan is presented at Appendix 01.

This report presents the following:

- Phase One (desk study) environmental assessment (Preliminary Land Quality Risk Assessment);
- review of geological and hydrogeological data for the site;
- analysis of historical maps to establish the history of the site as well as past on and off site potentially contaminative activities;
- collection and analysis of environmental data and proprietary database; and
- site conceptual model and recommendations for further assessment, as required.

This report has been prepared by the SLR Land Quality Group based at Mill Barn, Hollingworth Court, Turkey Mill, Maidstone, Kent, ME14 5PP65. Tel: 44 (0)1622 609242.

1.2 Scope and Objectives

This document is designed to address Condition 3 of the planning permission 21/01744/VAR which is reproduced below:

3. Land Contamination (Site Investigation): If identified as being required following the completion of the desk-top, a site investigation shall be carried out prior to commencement of development to fully and effectively characterise the nature and extent of any land contamination and/or pollution of controlled waters. It shall specifically include a risk assessment that adopts the Source-Pathway-Receptor principle, in order that any potential risks are adequately assessed, taking into account the sites existing status and proposed new use. Two copies of the site investigation and findings shall be forwarded to the LPA without delay, upon completion.

This assessment provides information about the environmental condition of the site including site history, current uses, geology, hydrogeology and hydrology. This information will be used to create a Conceptual Model and assess potential contaminant sources, pathways and receptors associated with the site. Where significant risks are identified, recommendations for further works are included.

1.3 Proposed Development

SLR understands that the re-development proposal for the site comprises the demolition of the existing forecourt, canopy and shop building. A new shop building, four new pump islands and new canopy are to be constructed. The existing fuel tanks and forecourt interceptor are to be retained while the tank vents and tank fills are to be relocated. The previous car wash interceptor will be removed. A new vacuum/air and water bay will be constructed, as well as two EV charging bays and additional car parking. A proposed development drawing is included at Appendix 01.

2.0 PHASE ONE DESK STUDY

2.1 Introduction

The purpose of a Phase One environmental assessment is to introduce the site and present a preliminary environmental risk assessment. The assessment collates information concerning potential contaminants, pathways and receptors and other relevant characteristics of the site and its surrounds. This involves a study of the site's current and historical land use and is achieved via a combination of desk-based research, site reconnaissance and regulatory consultation.

The scope of work comprised:

- reviewing previous studies/investigations carried out at the site for which reports have been provided to SLR;
- review of the current and historical uses of the site and surrounding area, including any current or past potentially contaminative activities, to identify potential contaminant linkages;
- review of the underlying soils and the geological, hydrological and hydrogeological features, including any abstraction or discharge consents within the vicinity of the site;
- reviewing pertinent accessible information from regulatory authorities and other sources such as Environment Agency (EA), the Local Authority, Petroleum Officer (PO), Groundsure, the British Geological Survey (BGS) and the Ordnance Survey;
- undertaking a site visit to inspect fuel storage and distribution infrastructure and examine site records;
- collation of information about the site's setting and conditions to form a Conceptual Site Model. Review of contaminant sources, pathways and receptors applicable to the site; and
- preparation of this report, detailing the collated information and recommendations for further investigation works, if deemed necessary to meet the requirements of the local planning authority.

It should be noted that the site inspection did not extend to any underground features, any enclosed spaces where special entry precautions would have been required, the structural condition of buildings, the geotechnical stability of walls or the potential environmental impact on any media other than that of the land. An asbestos survey was not carried out.

A Phase One environmental assessment can only indicate the potential for contamination to be present on site and refers to conditions present at the site at the time of the study.

2.2 Site Details, Setting and History

Table 2-1 provides a summary of the site details and environmental setting based on a review of published information and previous assessment reports. The site location is indicated on Drawing 01 and the site layout is shown on Drawing 02.

Table 2-1: Site Details

Detail	Description	
Location	The site is located at the following address: Laindon Service Station, Southend Arterial Road, Basildon, Essex, SS15 6DT National Grid Reference 567813, 190035 (Drawing 01).	
Site Description and Use	SLR undertook a site walkover on 10 th February 2022. The site is an operational petrol filling station with six pump islands located centrally on the site. The shop is located in the west of the site with the six operational underground storage tanks located in the east and northeast of the site. A three-stage oil/water interceptor is located in the northeast, located at the site's ingress. A second three-stage oil/water interceptor is located in the southwest of the site, behind the shop, which was previously associated with the now removed car wash.	
Drainage	Site drainage is via gullies and channel drains located at the offset fill point, in the southwest of the site and at the site ingress and egress. These drain into the forecourt interceptor located in the northeast of the site and also into the old car wash interceptor in the southwest, both appear to discharge to the main sewer located in the Southend Arterial Road (A127).	
Surrounding Land Use	North	Directly north is the A127 dual carriageway with residential properties beyond. A car hire business is located approximately 45m to the northwest and is located on a former petrol filling station site.
	East	A car sales and repair business is immediately adjacent to the site with commercial and industrial land beyond.
	South	Commercial and industrial land with residential properties approximately 200m from the site.
	West	Commercial and industrial land with residential properties approximately 250m from the site.
Geography and Hydrology	Topography and gradient	The general topographic setting of the site is relatively flat and level, falling slightly towards the east at a gradient of 0.02 (2%).
	Elevation	Approximately 33m above Ordnance Datum.
	Surface waters	There are 18 records of surface water features located within 500m of the site. The closest of which is located 240m to the east, where it is culverted beneath the A127. This surface water feature is a tributary of the River Crouch, which is located approximately 1km to the northeast.
	Surface water abstractions	There are no active surface water abstractions recorded within 2km of the site. Two historical abstractions are recorded, approximately 1,140m to the northwest and 1,250m to the northeast.
Published Geology and Hydrogeology	Superficial drift geology	Head deposits - clay, silt, sand and gravel.
	Solid geology	London Clay Formation – clay.

Detail	Description	
	Aquifer Status	The superficial deposits are classed as a secondary undifferentiated aquifer – assigned where it is not possible to attribute either a secondary A or secondary B classification to a rock type. The solid geology is classed as unproductive strata.
	Groundwater abstractions	There are no groundwater abstractions located within 2km of the site.
	Source protection zones (SPZ)	The site is not located within a groundwater source protection (SPZ).

2.3 Site History

The age and general type of activity and land use can often be determined from the type and layout of structures depicted on OS maps. However, specific elements of site operations cannot normally be determined from such extracts. Large scale (1:1,250/2,500) and small scale (1:10,560/1:10,000) historical map extracts were reviewed for selected years between 1874 and 2022, together with current mapping, freely available aerial imagery and previous reports. A summary of the site’s history is presented in Table 2-2 below and copies of the maps are presented in Appendix 02.

Table 2-2: Historical Land Use Summary

Location	Land Use Summary
On-site	The earliest available maps from 1874 show the site to be open agricultural land. The site remained as such until 1938 when the A127 was constructed directly to the north and a side road was present on-site. By 1956 a single structure is mapped on site. Mapping from 1967 shows two structures on site and the site is labelled as a garage. The site remained as a garage until 1987 when it was redeveloped into its current layout as a petrol filling station. The site layout and land use has remained the same since.
Off-site	The surrounding land was largely agricultural and open fields between the earliest mapping of 1874 and 1924. Mapping from 1924 shows residential development 500m to the south and north. By 1938 the A127 had been constructed and significant residential development had occurred with the town of Laindon becoming more established. Directly to the west of the site two structures had been constructed. Mapping from 1960 shows further residential development to the north, east and south, also approximately 300m south the Laindon High Road Secondary School is now shown. Approximately 750m northeast a works is labelled. Mapping between 1967 and 1970 have the adjacent buildings labelled as factories and a chromium works. Two garages are present approximately 40m to the north and northwest. A factory is now shown to the south of the site. A works is shown 120m northeast and an abattoir 120m to the east. Between 1970 and 2010 significant residential development has occurred within a 1km radius of the site. By 2010 all works and factories are no longer labelled. The school to south is no longer shown and industrial development has occurred in its place. Mapping from 2022 shows more development to the south and west.

The site was unoccupied, open agricultural land until 1938 and between 1967 and 1987 the site was used as a garage. From 1987 the site was redeveloped as a petrol filling station with the site layout remaining the same to this day.

The most significant potentially contaminative land uses in the vicinity of the site are the storage and dispensing of fuel at the site itself and the various nearby factories, garages and works.

2.4 Fuel Infrastructure

Information obtained during the site walkover, from previous assessment work at the site and from a report obtained from the local Petroleum Officer (Essex County Council) in February 2022 is combined in Table 2-3. The Petroleum Officer report is presented at Appendix 03 and confirms that Essex County Council holds no records relating to failures, leaks, vapour releases or major incidents. The Petroleum Officer report from SLR's previous report for the site (see section 4) is also presented at Appendix 03 for reference.

Tanks 1 to 6 comprise four double compartment and two single compartment underground storage tanks (USTs).

Table 2-3: Tank Summary

Tank No	Capacity (litres)	Contents	Construction	Age of Installation
1	22,020	Supreme Unleaded Petrol	Double skin steel	1987
2	22,022	Diesel	Double skin steel	1987
3	17,450	Supreme Diesel	Double skin steel	1987
4	26,380	Diesel	Double skin steel	1987
5	44,030	Unleaded Petrol	Double skin steel	1987
6	27,200	Diesel	Single skin steel	1979

The Petroleum Officer report has no records of any decommissioned tanks on site.

In February 1999 the suction pipework from Tank 4 failed a pressure test. Testing of all suction and off-set fill pipework was subsequently carried out in April 1999, a certificate was issued stating that all pipework had passed the pressure test.

There is one recorded spillage on-site, in August 5th, 2014. The record states that 'petrol contents of a pump hose was spilled when a customer drove away with the nozzle in the car. The safety cut-out worked and the spill was contained to the hose contents'. No other incidents have been recorded on site.

The Petroleum Officers records start from 1974 and the report provides no information prior to this, however information obtained in a previous SLR report for the site states that six single skin steel USTs were installed in 1944 (four of which were 500 gallon tanks and two 3,000 gallon tanks) and a further 6,000 gallon single steel tank was installed in 1979 in the northeast of the site (Appendix 03). The site was redeveloped in 1987 into its current layout, with the tank in the northeast being retained and becoming Tank 6, the remaining tanks were removed and replaced with the current Tanks 1 to 5. The Petroleum Officer report obtained in February 2022 states that Tank 6 is a double skinned steel tank installed in 1987, however it is clear from the Petroleum Officer report and site drawings obtained for SLR's previous report for the site that in fact Tank 6 was installed in 1979.

The locations of the current tanks are shown on Drawing 02.

Fairbanks Environmental Ltd operate the site's wet stock management and use a real time continuous wet stock and leak detection statistical inventory reconciliation (SIR) system accredited to 9 litres per day. Fairbanks has confirmed that they have been monitoring the site since August 2008 on behalf of MFG. During this period, they have not recorded any evidence of a release of product to the ground. A performance letter from Fairbanks is presented at Appendix 03.

3.0 Environmental Searches

The Magic website (provides authoritative geographic information about the natural environment from across government) and available EA datasets have been consulted with regard to former landfill sites. The EnviroInsight Report was also reviewed to gain information on publicly available environmental data for the site and immediately surrounding area.

A copy of the EnviroInsight Report information obtained by SLR is contained in Appendix 04 and a summary of the search information is provided below:

- *Contaminated Land Register* – there are no properties determined as Contaminated Land under Part IIA EPA 1990 within 500m of the site.
- *Records of IPC/IPPC Authorisations* – there are no recorded IPC/IPPC authorisations, Part A(1) activities, List 1 dangerous substances inventory sites, or Category 3 or 4 Radioactive Substances Authorisations within 500m of the site.
- *Pollutant release to surface water (red list)* – there are no records within 500m of the site.
- *List 2 dangerous substances inventory site* -there are none recorded within 500m of the site.
- *Records of Part A(2) and Part B Activities and enforcements* – there is one current Part B type permit listed on-site for the unloading of petrol into storage at service stations. There are two historical Part B permits listed on-site, both relating to petrol vapour recovery. There are six other records within 500m of the site. Five of which are historical, which were for Coating Processes, Dry Cleaning and Petrol Vapour recovery and unloading of petrol into storage at service stations, the closest of which was 40m east of the site. The sixth permit is associated with Fortune Connect Service Station, approximately 200m east of the site and relates to the unloading of petrol into storage as service stations.
- *Records of Licensed Discharge Consents* – there are three licensed discharge consents within 500m of the site, two of which have been revoked. The third is approximately 430m northeast of the site at Latimer Drive SPS for sewage discharges at a pumping station.
- *Environment Agency recorded pollution incidents* – there are ten recorded pollution incidents within 500m of the site, three of which were recorded as minor or no impact. All ten were recorded as minor or no impact to water. Seven of the recorded pollution incidents were recorded to have significant impact to land, these are:
 - 130m west of the site in 2013, the pollutant was recorded as chemicals/products and described as alkalis.
 - The other six incidents occurred approximately 460m southwest of the site, on 23/07/2001 and all relate to waste materials – household waste, commercial waste and vegetable cuttings.
- *Landfill sites / licensed waste management/treatment facilities* – no active, recent or historical landfills are recorded within 500m.
- *Licensed waste sites* – there is no record of licensed waste site within 500m of the site.
- *Waste exemptions* – there are 14 records of waste exemptions sites within 500m. The closest of which is 140m to the south and relates to the storage of waste in secure containers.
- *Industrial land uses* – there are 47 current industrial land uses recorded within 250m of the site. These include:
 - on site- petrol station and vehicle cleaning services;

- off-site- works or factories, new vehicles, electrical features, vehicle hire and rental, gas features, musical instruments, published goods, general construction supplies and distribution and haulage.

There are 3 historical industrial land uses within 250m of the site, these are unspecified factories in 1971 and 1982 and an abattoir approximately 135m southeast.

- *Historical garages* – there are 6 records of historical garages within 500m of the site, two of which are recorded on-site in 1969 and between 1979 and 1981. The closest off-site being 30m north between 1969 and 1979 and 35m north in 1969.
- *Historical Tanks* – there are two records of historical tanks within 500m of the site. The closest being 40m to the south, in 1995.
- *Groundwater vulnerability* – the superficial geology is classed as medium vulnerability and the bedrock geology is classed as unproductive strata.
- *Sensitive land uses* – the site is located in a nitrate vulnerable zone.

4.0 Previous Reports

SLR is aware of one previous assessment of the site, the report for which is listed at Table 4-1 and summarised below.

Table 4-1
Previous Site Assessments

Ref	Date	Document Title and Author
1	February 2018	SLR Consulting Ltd: Environmental Site Assessment Report SLR Ref: 416.06307.00019

SLR undertook an Environmental Site Assessment (ESA) in February 2018 to support a planning application 18/01684/Full. The proposed development involved:

- Demolition of all above ground infrastructure.
- Removal of current and historic below ground fuel storage and dispensing infrastructure.
- Installation of new underground fuel tanks.
- New petrol forecourt with new canopy.
- New fuel distribution pipework and pumps.
- Installation of a new shop and above ground facilities.

The report produced a preliminary conceptual model of potential risks to human and environmental receptors and aimed to establish whether there is evidence of significant subsurface contamination. The Conceptual Model and Preliminary Risk Assessment concluded that the site has a recent history of potentially contaminative activities and therefore underlying hydrocarbon impact may be present. Due to the absence of previous intrusive investigations the report considered there to be a possible risk to human health and controlled waters and recommended further assessment was needed.

The report concluded that the planned development works would provide environmental betterment of the site by allowing assessment and replacement of the current fuel infrastructure. The works would also allow for the assessment and if necessary, any remediation of impacted soils that posed an unacceptable risk to human health or controlled water receptors. The report stated that development should be undertaken in accordance with an agreed engineering plan and method statements that ensure:

- Betterment is achieved by removing all redundant historical infrastructure.
- Validation samples are recovered from decommissioning excavations to provide a baseline of current site conditions and a completion report is prepared that presents the validation test results.

5.0 Conceptual Site Model

This report section uses the information gathered in previous sections and aims to identify the potential Contaminants, Pathways and Receptors present with respect to the site and assess their significance and acceptability.

When considering the contaminants, receptors and pathways relevant to this site, SLR has been mindful of the site's continued use as a petrol filling station.

The statutory guidance for Part IIA, DEFRA Circular 04/12¹, defines a Contaminant as:

“a substance which is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of Controlled Waters”.

Based on historic mapping it appears the site consisted of open agricultural land until 1938. Until 1967 the site underwent several phases of redevelopment. Between 1967 and 1987 the site was used as a garage. Since 1987 the site operated as a petrol filling station and the site layout has remained unchanged.

The proposed re-development comprises the demolition of the existing forecourt, canopy and shop building. A new shop building, four new pump islands and new canopy are to be constructed. The existing fuel tanks and forecourt interceptor are to be retained but the tank vents and tank fills will be relocated. The disused car wash interceptor will be removed. A new vacuum/air and water bay will be constructed, as well as two EV charging bays and additional car parking.

The main source of contamination at the site is considered to be current and historic hydrocarbon fuels stored and retailed at the site.

Other potential sources of off-site contamination include the historical adjacent factories and chromium works, the adjacent Laindon Hill Motors and the former petrol filling stations located approximately 40m to the north of the site. These sources are located down gradient of the site and therefore are not considered to pose an unacceptable risk to on site receptors.

The statutory guidance for Part IIA, DEFRA Circular 04/12, defines a Pathway as:

“a route by which a receptor is or might be affected by a contaminant”.

Following an assessment of the environmental and geological setting of the site and the land use, it is considered that potential pathways for contaminant impact are present. The validity of each of these pathways is assessed in Table 5-1 below.

The statutory guidance for Part IIA, DEFRA Circular 04/12, defines a Receptor as:

“something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or Controlled Waters.”

Post redevelopment the site will continue to operate as a petrol filling station, therefore, potential on-site human health receptors will be present (site staff and future site users). The site is also proximal to commercial properties with residential properties beyond, therefore off-site human health receptors are also considered to be present. The superficial geology is classed as a secondary undifferentiated aquifer which theoretically has future resource potential. Therefore, controlled water receptors are also present.

The potential contaminant linkages are detailed in Table 5-1 and Figure 5-1 below.

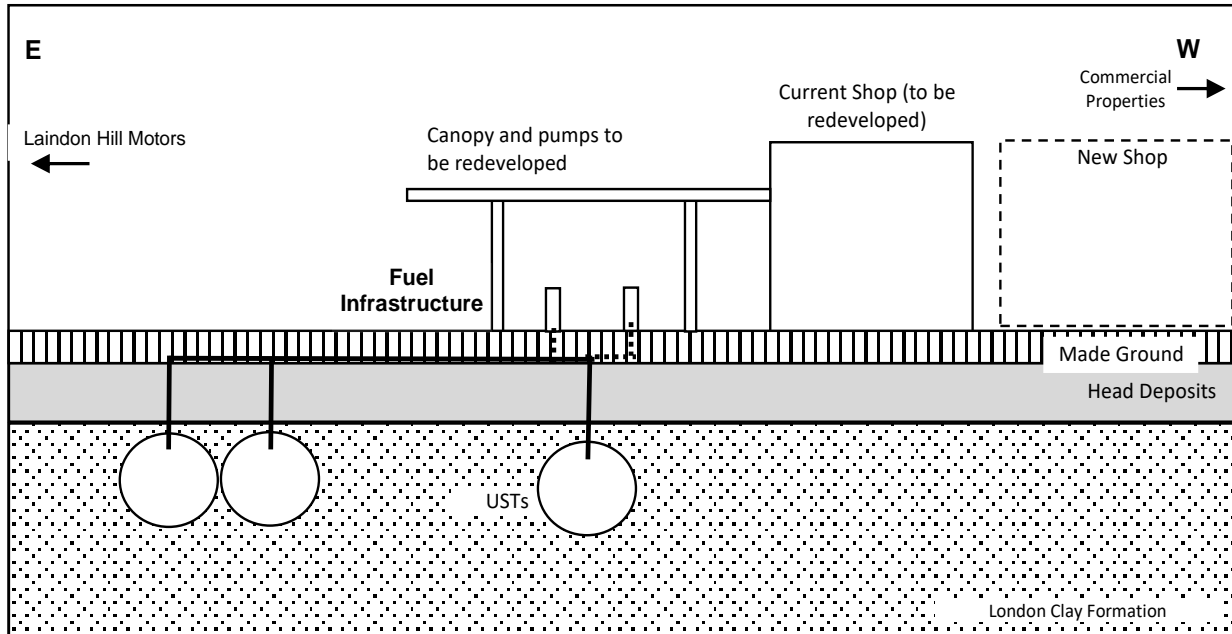
¹ DEFRA; 2012; EPA 1990: Part2A, Contaminated Land Statutory Guidance, PB13735; April 2012

**Table 5-1:
Conceptual Site Model and Qualitative Risk Assessment**

Source	Pathway	Receptors	Significant?	Comments
On-site: The site has operated as a petrol filling station since the 1980s with on-site tanks since 1944	Inhalation of indoor or outdoor air	On-site health	Potentially	<p>Potentially contaminative land uses have been identified on and close to the site, therefore underlying hydrocarbon impact may be present beneath the site.</p> <p>No previous intrusive investigations have been carried out therefore the quality of the underlying soils and groundwater are unknown. Significant contamination beneath the site is unlikely as there are no records of leaks or fuel loss. However, the risks cannot be completely ruled out at the desk study stage.</p>
		Off-site health	Potentially	<p>Commercial properties are located directly to the south, east and west, with residential properties located approximately 50m to the north.</p> <p>No previous intrusive investigations have been carried out therefore the quality of the underlying soils and groundwater are unknown. Significant contamination beneath the site is unlikely. However, the risks cannot be completely ruled out at the desk study stage.</p>
	Direct ingestion / dermal contact	On-site health	No	<p>Significant contamination beneath the site is unlikely. However, the risks cannot be completely ruled out at the desk study stage. However, the proposed redevelopment will be predominately hard surfaced which mitigates the potential risks to on-site workers and customers from direct contact with contaminated materials.</p> <p>Short term risks to construction workers can be managed through use of appropriate work systems and personal protective equipment. However, there still remains a risk, albeit low, that a complete pollutant linkage is present.</p>
	Vertical migration of contaminants	Ground water	Potentially	<p>No previous intrusive investigations have been carried out therefore the quality of the underlying soils and groundwater are unknown.</p> <p>There are no groundwater abstractions within 2km of the site.</p>

Source	Pathway	Receptors	Significant?	Comments
				<p>The underlying bedrock is unproductive strata.</p> <p>The shallow superficial deposits beneath the site are classified as a secondary undifferentiated aquifer.</p>
	Lateral migration of dissolved contaminants	Surface water	No	<p>No active surface water abstraction licenses are located within 2km of the site.</p> <p>The closest surface water feature is approximately 240m east of the site, due to the distance SLR do not consider there to be a risk to surface water receptors.</p>
		Ground water abstraction wells	No	<p>There are no groundwater abstractions within 2km of the site.</p>

Figure 5-1
Conceptual Site Model



Considering the site and the surrounding land uses, underlying shallow hydrocarbon impact may be present beneath the site. In the absence of any previous intrusive investigations to assess the sites underlying soil and groundwater quality the conceptual site model has identified potentially complete pollutant linkages. SLR has identified potential risks posed to human health and controlled waters.

6.0 Summary and Recommendations

6.1 Summary

With respect to the environmental condition of the site, SLR makes the following observations:

- The site was unoccupied, open agricultural land until 1938, when it was developed as part of the adjacent factories. Between 1967 and 1987 the site was used as a garage. In 1987 the site was redeveloped and used as a petrol filling station with the site use and layout remaining the same to this day.
- The site's surroundings have a history of commercial and industrial uses. Factories and a chromium works were located directly to the east and south of the site and two petrol filling stations were located approximately 40m north of the site.
- The site is underlain by superficial deposits of Head Deposits (clay, silt, sand and gravel) which is classified as a secondary undifferentiated aquifer. The underlying bedrock is the London Clay Formation which is classified as an unproductive strata. The groundwater flow is anticipated to be towards the north.
- There are no active groundwater or surface water abstractions within 2km of the site.
- The nearest surface water feature is located approximately 240m to the east.
- There are six operational tanks on-site (Tanks 1 to 6). Five of which were installed in 1987 when the site was redeveloped into its current layout and one of which was installed in 1979.
- The development proposal for the site comprises of the demolition of the existing forecourt, canopy and shop building. A new shop building, four new pump islands and new canopy are to be constructed. The existing fuel tanks and interceptor are to be retained but the tank vents and tank fills will be relocated. The disused car wash interceptor will be removed. A new vacuum/air and water bay will be constructed, as well as two EV charging bays and additional car parking.
- The historical and current uses of the site and its surroundings indicate the potential for contamination to be present. Additionally, no previous intrusive investigations have been carried out to assess the soil and groundwater quality beneath the site. Therefore, SLR's Conceptual Site Model has identified potentially complete pollutant linkages to on and off-site human health receptors and to controlled waters in relation to the current condition of the site and its use as a petrol filling station.

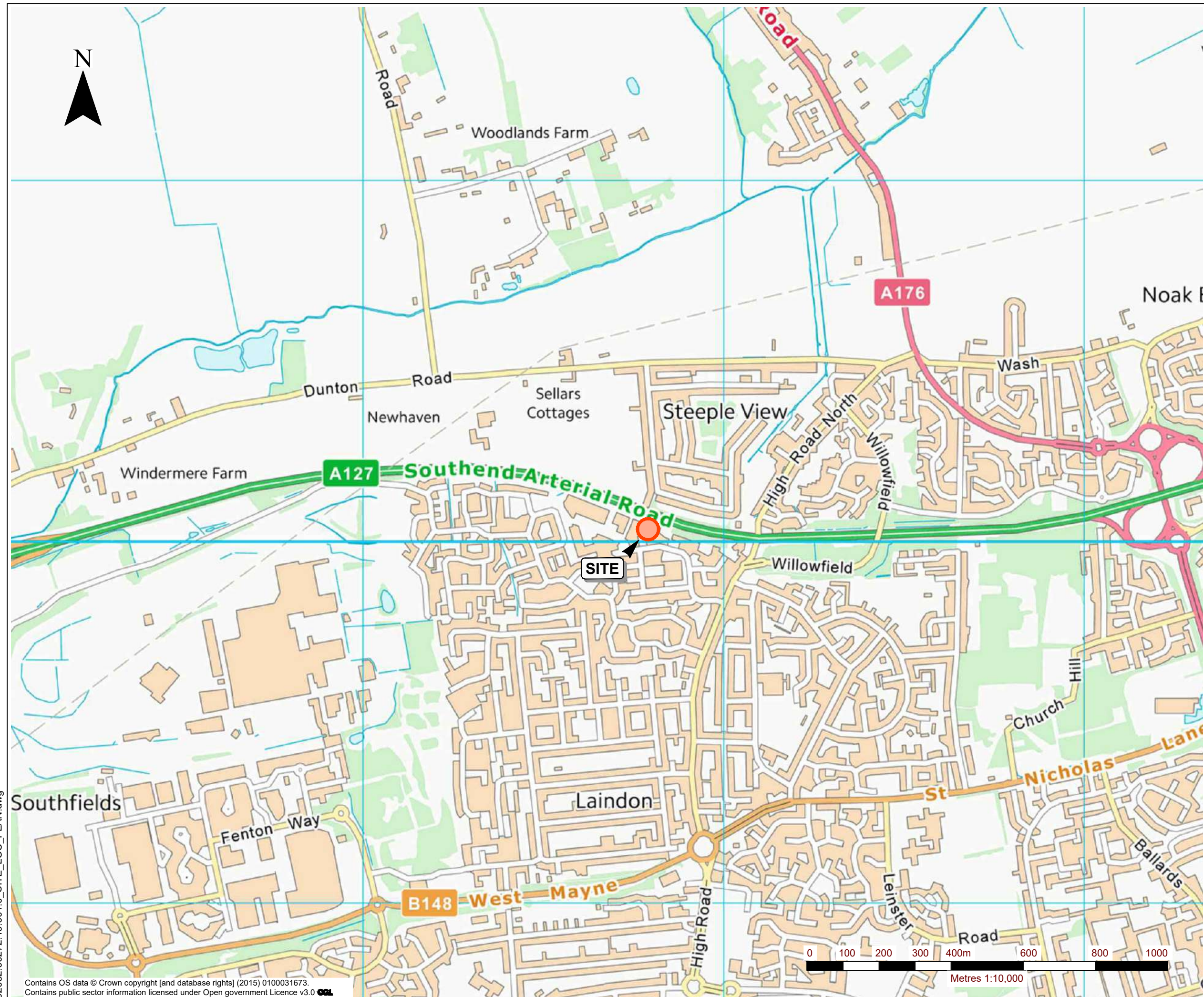
6.2 Recommendations

The absence of historical site investigation data means that further assessment is required to characterise the environmental condition of the underlying soils and groundwater. The planned redevelopment of the site provides an opportunity for this assessment and also allows for the remediation, if necessary, of any impacted soils and groundwater that are identified during the works that pose an unacceptable risk to human health or controlled water receptors. The planned redevelopment works should thus be undertaken in accordance with an agreed engineering plan and method statements.

A basic remediation method statement (RMS) is required to support the removal of the existing fuel pump islands, underground fuel pipework and carwash interceptor and address any unexpected contamination which may be encountered during the development.

The RMS should also include details of validation works to be carried out during development to confirm that post development no residual risks to human health or controlled waters remain. The findings of the validation works should be documented in a separate validation report.

DRAWINGS



NOTES



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LINDON SERVICE STATION
 PHASE ONE ENVIRONMENTAL
 ASSESSMENT
 SITE LOCATION PLAN
DRAWING 01

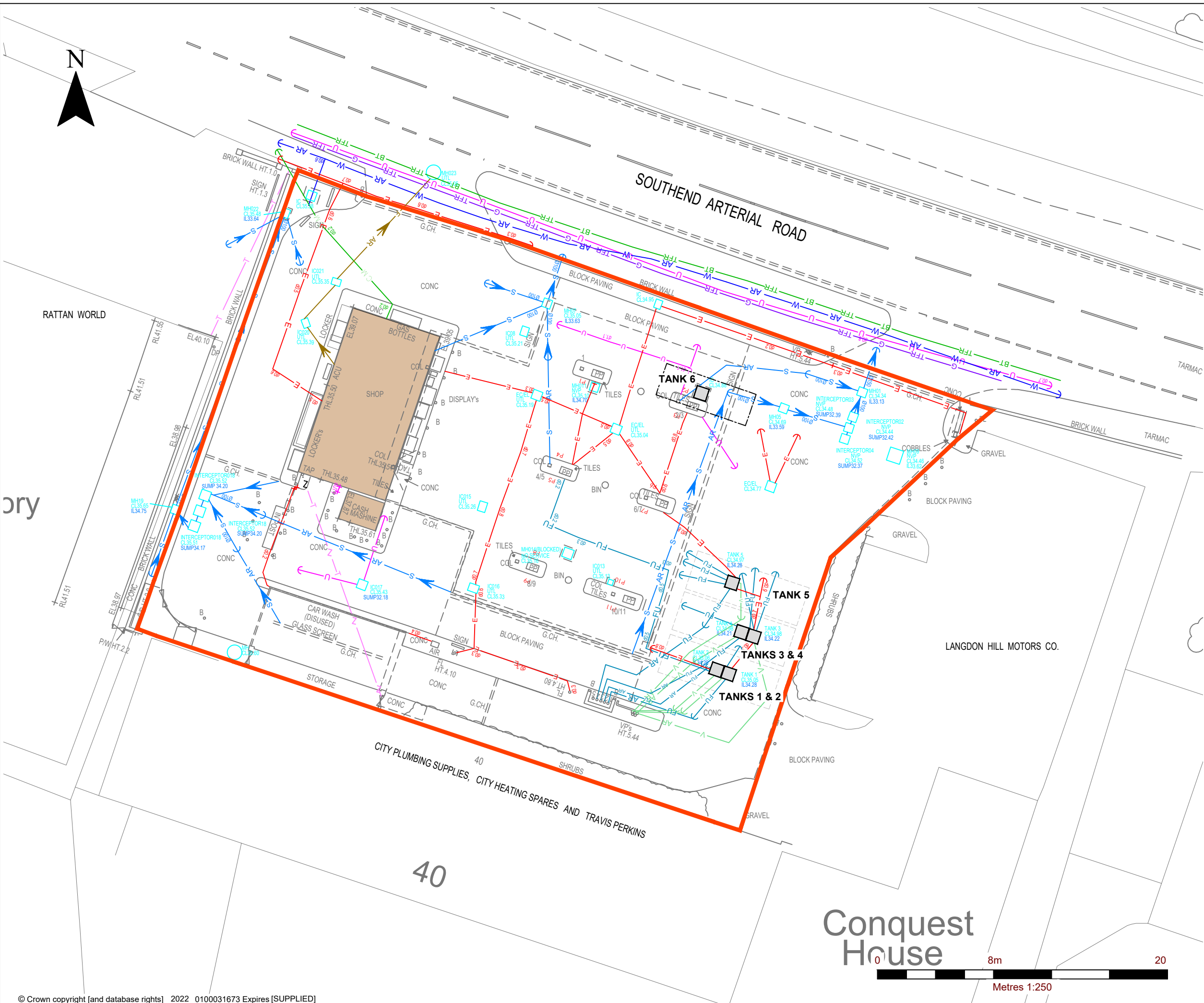
Scale: 1:10,000 @ A3 Date: FEBRUARY 2022

02082_00272_19_001_0_SITE_LOC_PLAN.dwg

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02082_00272.19.002.0_CURRENT_SITE_LAYOUT_PLAN.dwg



- NOTES**
1. DRAWING IS BASED ON WYETH PROJECT SERVICES EXISTING SITE PLAN, REF: WPS_MFG_104_P_11 REV A, DATED: FEB 2022.
 2. SERVICES ARE TAKEN FROM MALCOLM HUGHES UNDERGROUND SURVEY, REF: 18747/2, DATED: SEPT 2016.
- A — ABANDONED
 - AD — ACID DRAIN
 - BT — BRITISH TELECOM
 - TV — CABLE TV
 - CM — COMMUNICATION CABLES
 - C — SEWER COMBINED
 - S — SEWER SURFACE WATER
 - F — SEWER FOUL
 - DU — DUCTING
 - E — ELECTRIC CABLES
 - EF — EFFLUENT PIPES
 - FU — FUEL LINE
 - GA — FUEL GAUGE LINE
 - V — FUEL VENT LINE
 - G — GAS PIPES
 - H — HEATING PIPES
 - TL — TRAFFIC LIGHT CABLES
 - VR — VAPOUR RECOVERY PIPES
 - W — WATER PIPES
 - U — UNIDENTIFIED GPR OR ELECTRO LOCATION TRACE
 - — RISING MAIN
 - — SCAR TRACE
 - — END OF TRACE
 - E — TFR — TAKEN FROM RECORDS (NOT PROVEN ON SITE)
 - E — AR — ASSUMED ROUTE





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LAINDON SERVICE STATION
PHASE ONE ENVIRONMENTAL ASSESSMENT
CURRENT SITE LAYOUT PLAN

DRAWING 02

Scale 1:250 @ A3	Date FEBRUARY 2022
---------------------	-----------------------



Photo 1:
View of forecourt looking northwest.



Photo 2:
View of current UST farm looking north.



Photo 3:
View of site egress and forecourt interceptor, in the northeast of site.



Photo 4:
View of defunct carwash interceptor in the southwest of the site.



Photo 5:
View of forecourt looking northeast.



Photo 6:
View of off-set fill points and tank vents, looking west.

Notes:



427.02082.00272

Client:

MFG

Project:

LAINDON SERVICE STATION

Date:

FEBRUARY 2022

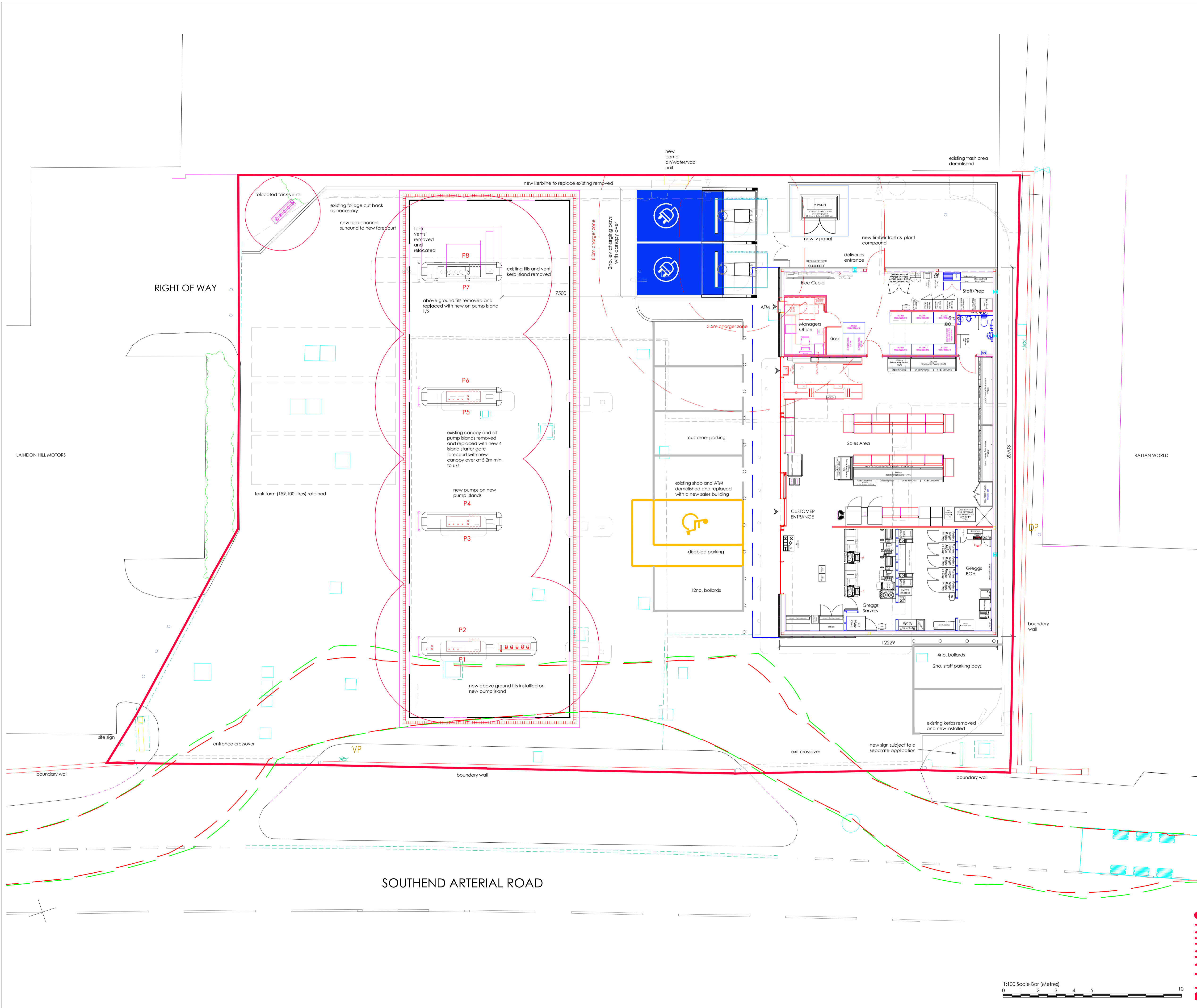
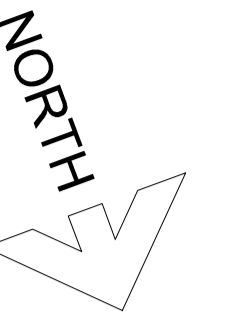
Drawing:

**OBSERVATION
PHOTOGRAPHS**

1 of 1

APPENDIX 01

Proposed Development Plans



rev	date	by	description
CLIENT			
mfg		Gladstone Place 36-38 Upper Marlborough Road St. Albans. AL1 3UU	
PROJECT LOCATION			
Laindon Service Station Arterial Road, Laindon, Essex. SS15 6DP			
DRAWING			
Replacement shop building and forecourt alterations Proposed Site Plan			
Date: September 2021		Drawn By: DB/DS	A1
Scale: 1:100		Dwg No: WPS-MFG-104-P-13	Rev:

PLANNING

APPENDIX 02

Historical Maps

Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: County Series

Map date: 1874

Scale: 1:2,500

Printed at: 1:2,500



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 Levelled N/A

Surveyed 1874
 Revised 1874
 Edition N/A
 Copyright N/A
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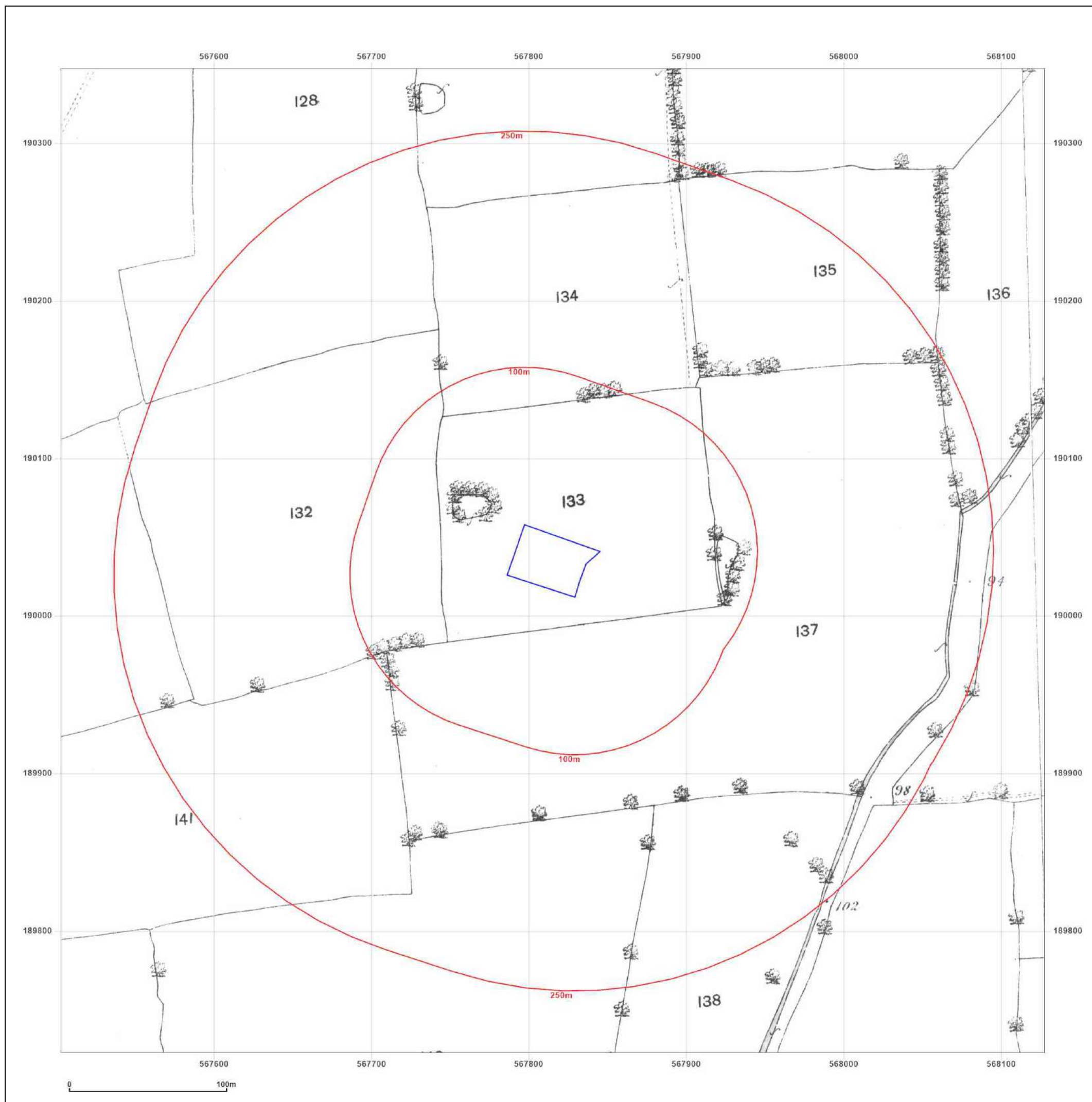


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Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: County Series

Map date: 1896

Scale: 1:2,500

Printed at: 1:2,500



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 Revised 1896
 Edition N/A
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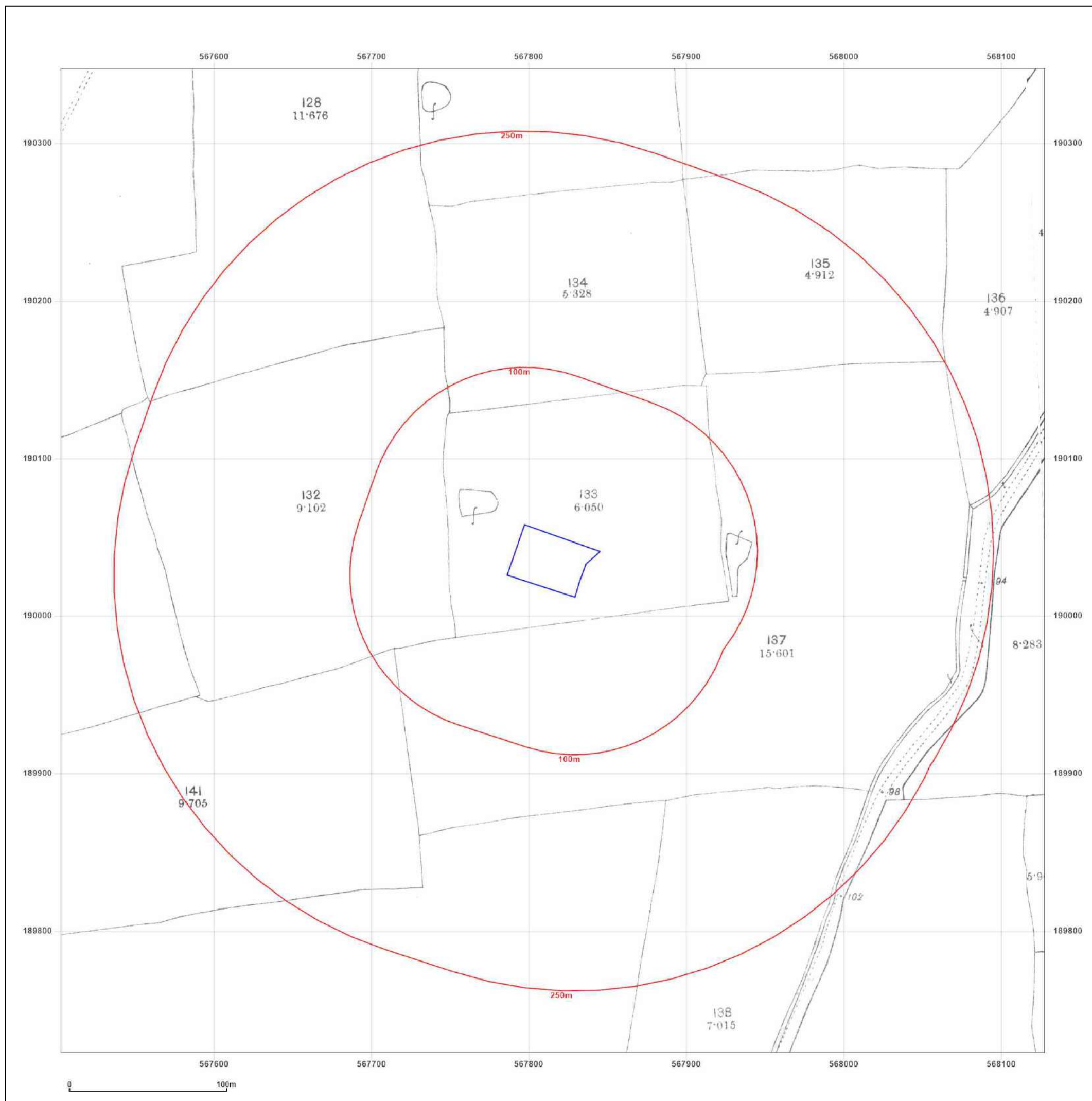


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Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: County Series

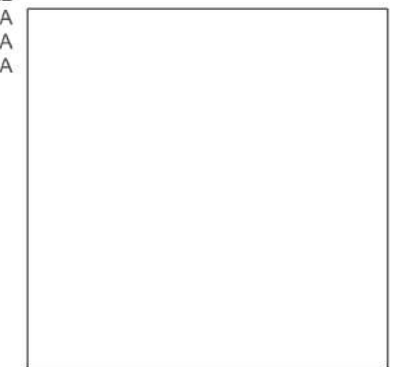
Map date: 1922

Scale: 1:2,500

Printed at: 1:2,500



Surveyed 1922
 Revised 1922
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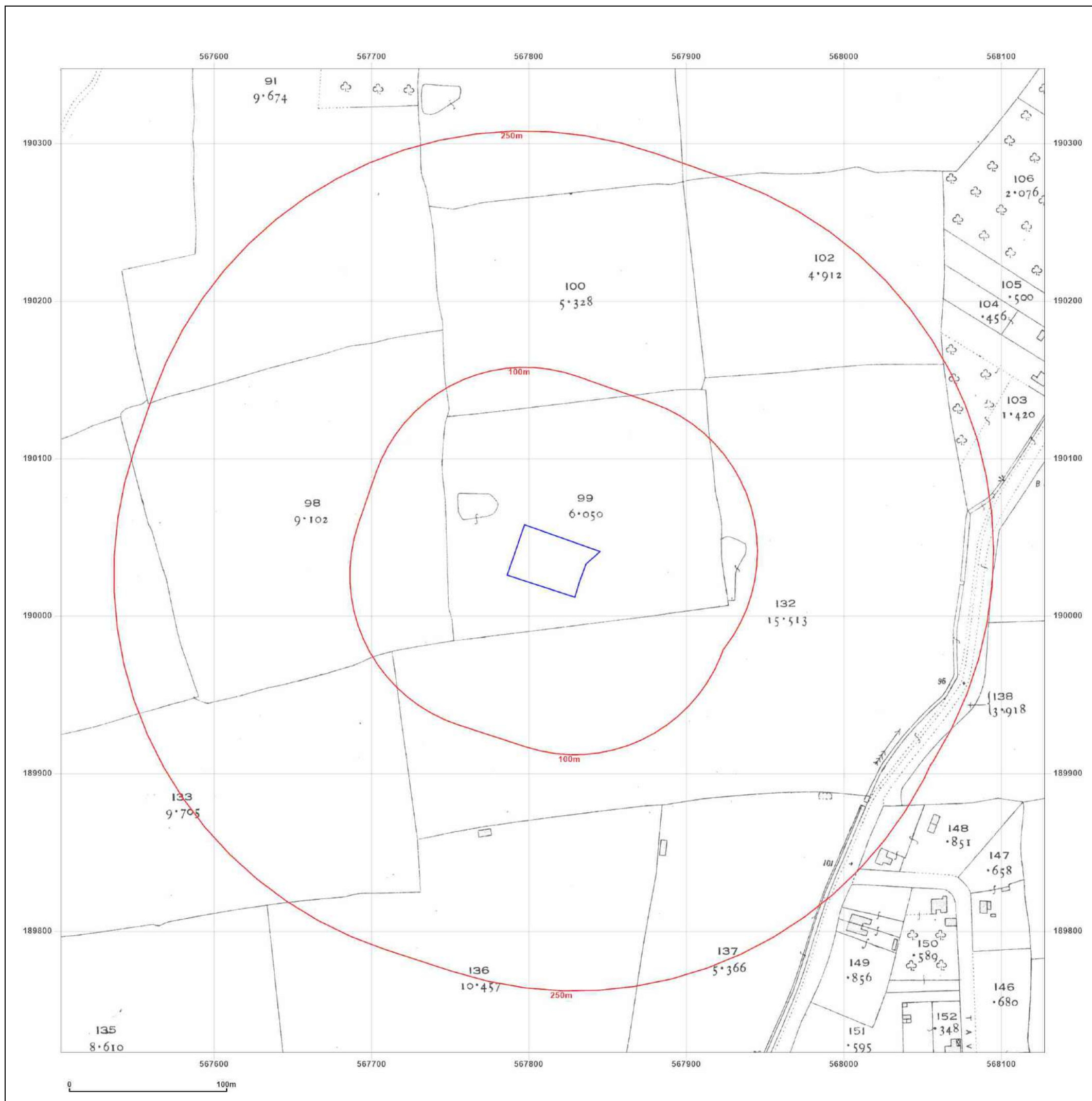


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Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1955-1956

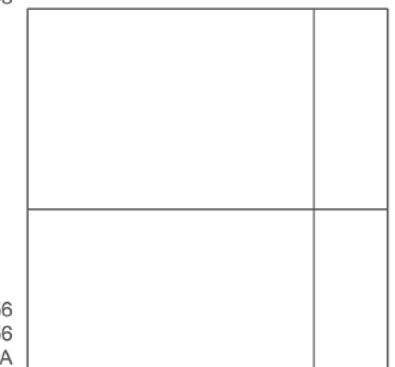
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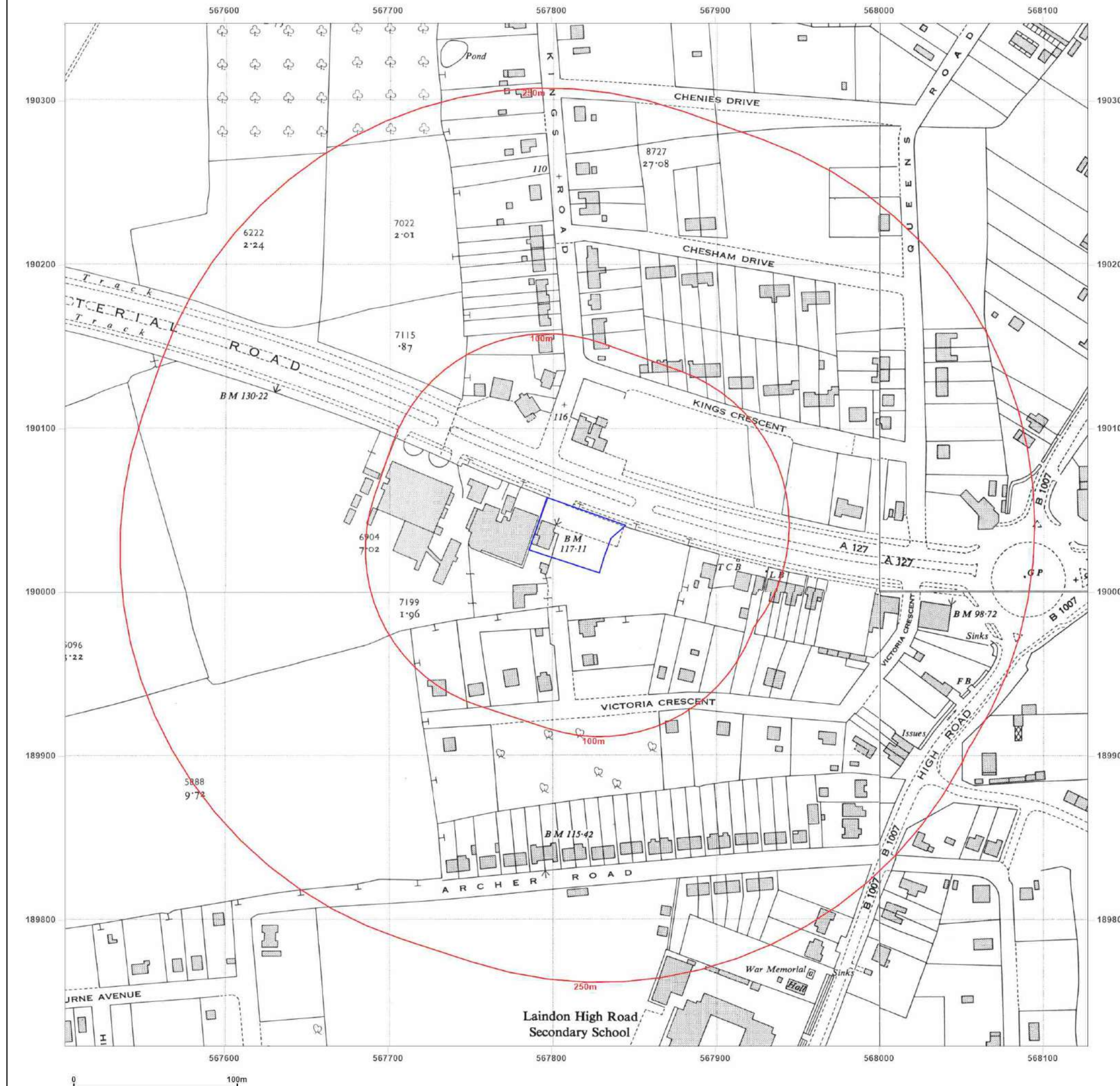
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 Edition N/A
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 Levelled 1948

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 Revised 1955
 Edition N/A
 Copyright N/A
 Levelled 1948



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 Revised 1956
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 Revised 1955
 Edition N/A
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Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1965

Scale: 1:2,500

Printed at: 1:2,500



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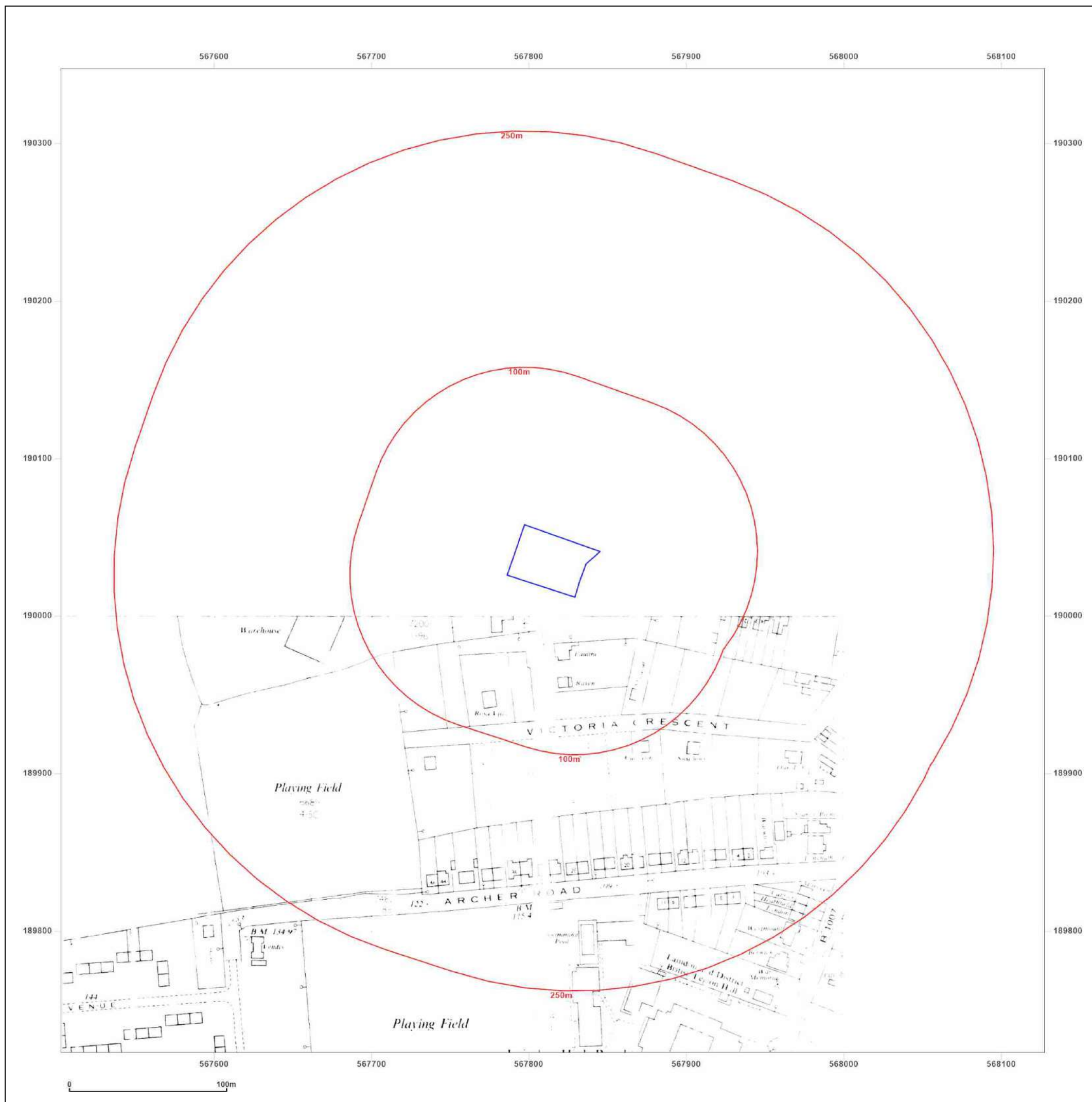


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Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1969-1970

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed 1968 Revised 1968 Edition N/A Copyright 1970 Levelled 1962	Surveyed 1968 Revised 1968 Edition N/A Copyright 1969 Levelled 1961



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Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1965-1970

Scale: 1:2,500

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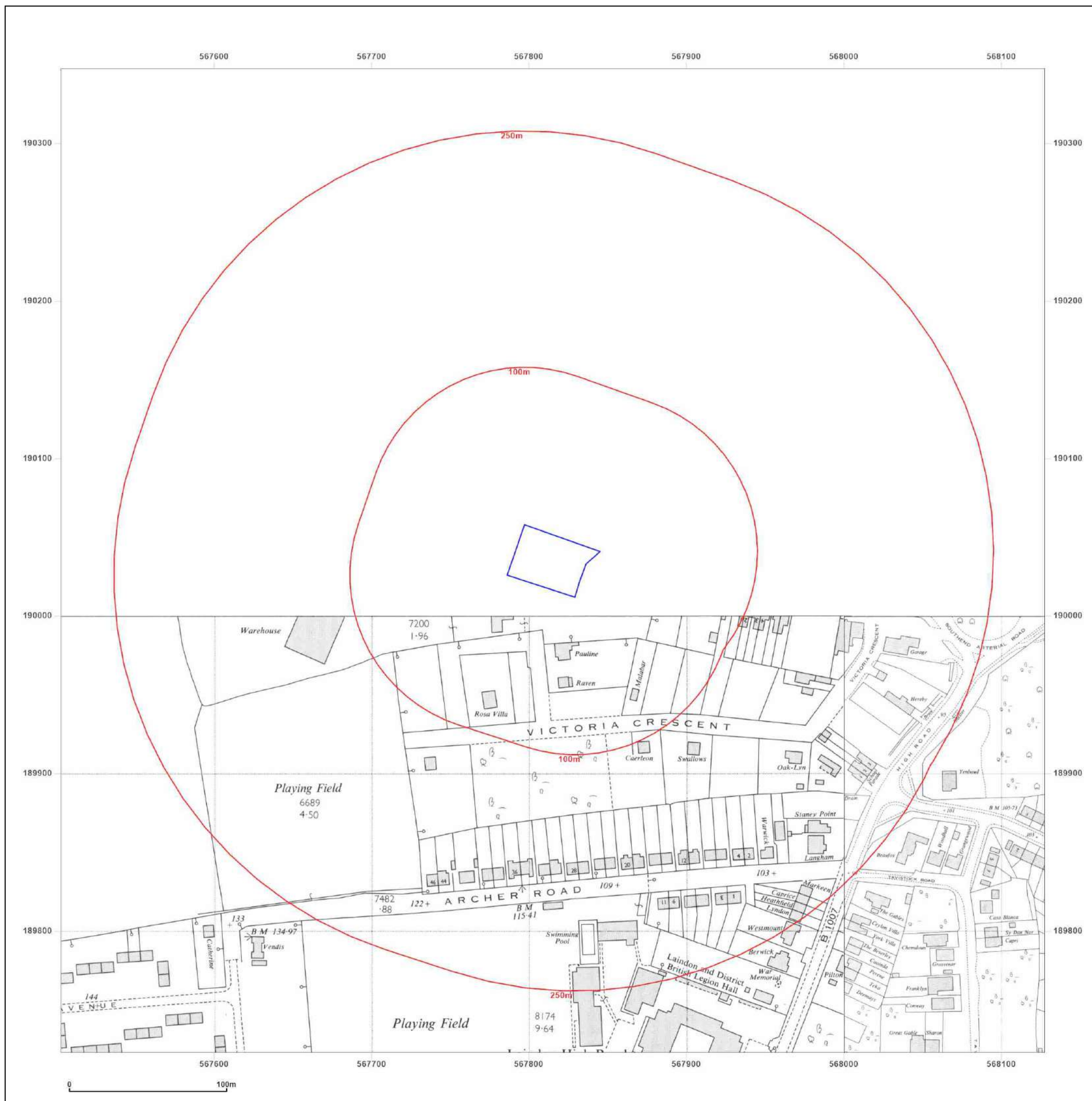


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Site Details:

Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1973

Scale: 1:1,250

Printed at: 1:2,000



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Edition N/A	Edition N/A
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Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1978-1980

Scale: 1:1,250

Printed at: 1:2,000



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Grid Ref: 567815, 190035

Map Name: National Grid

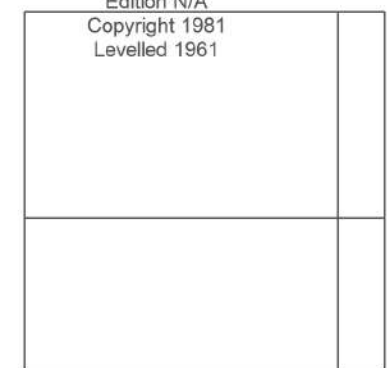
Map date: 1981-1984

Scale: 1:1,250

Printed at: 1:2,000



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Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1986

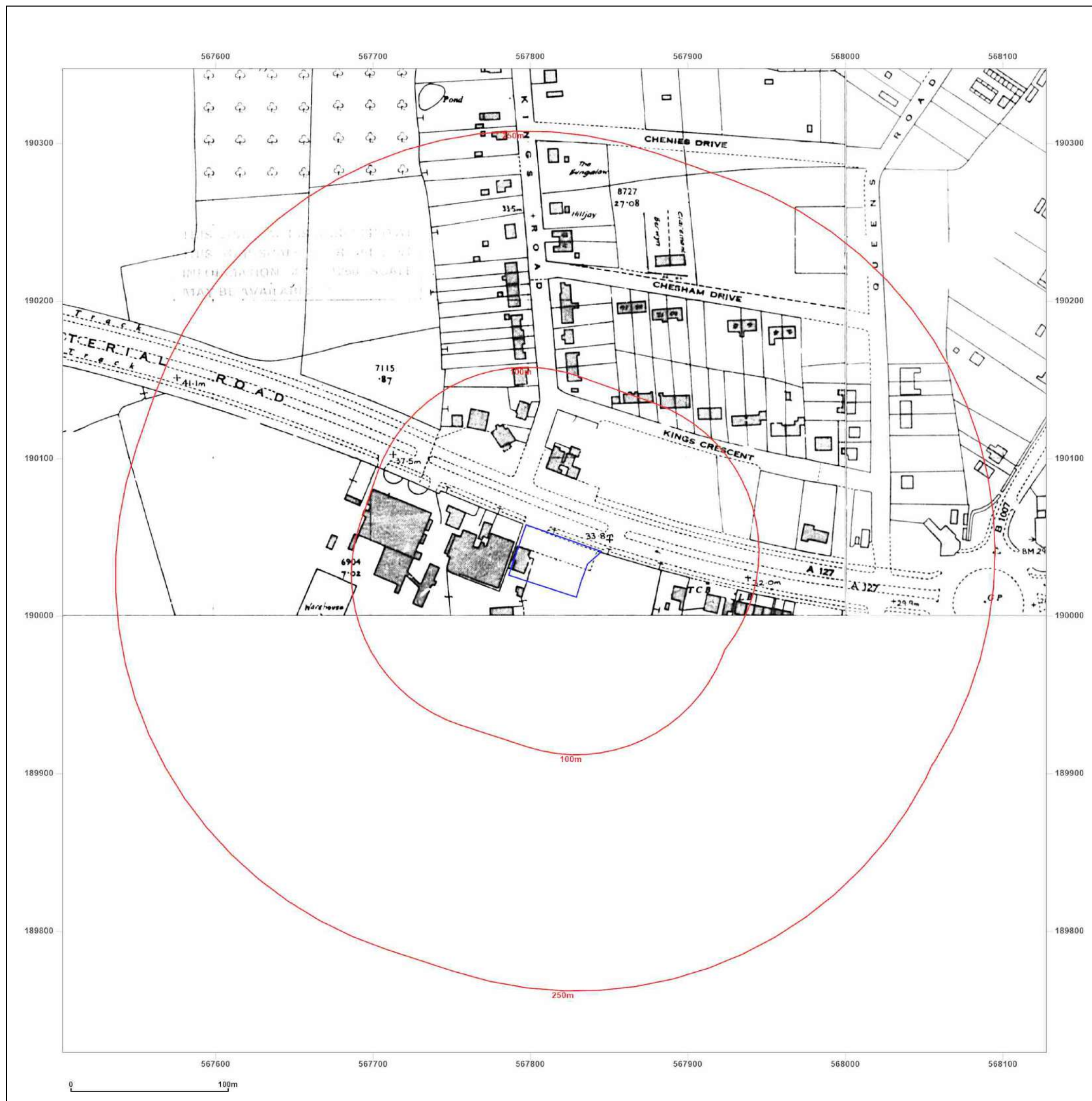
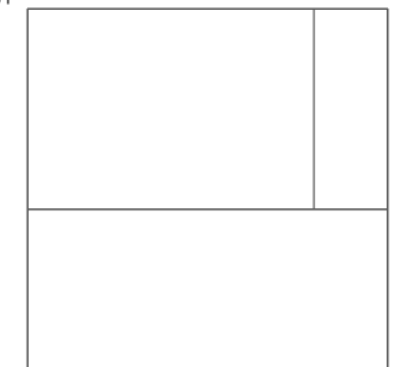
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Map Name: National Grid

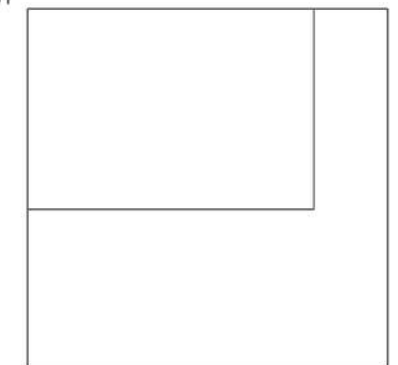
Map date: 1989

Scale: 1:2,500

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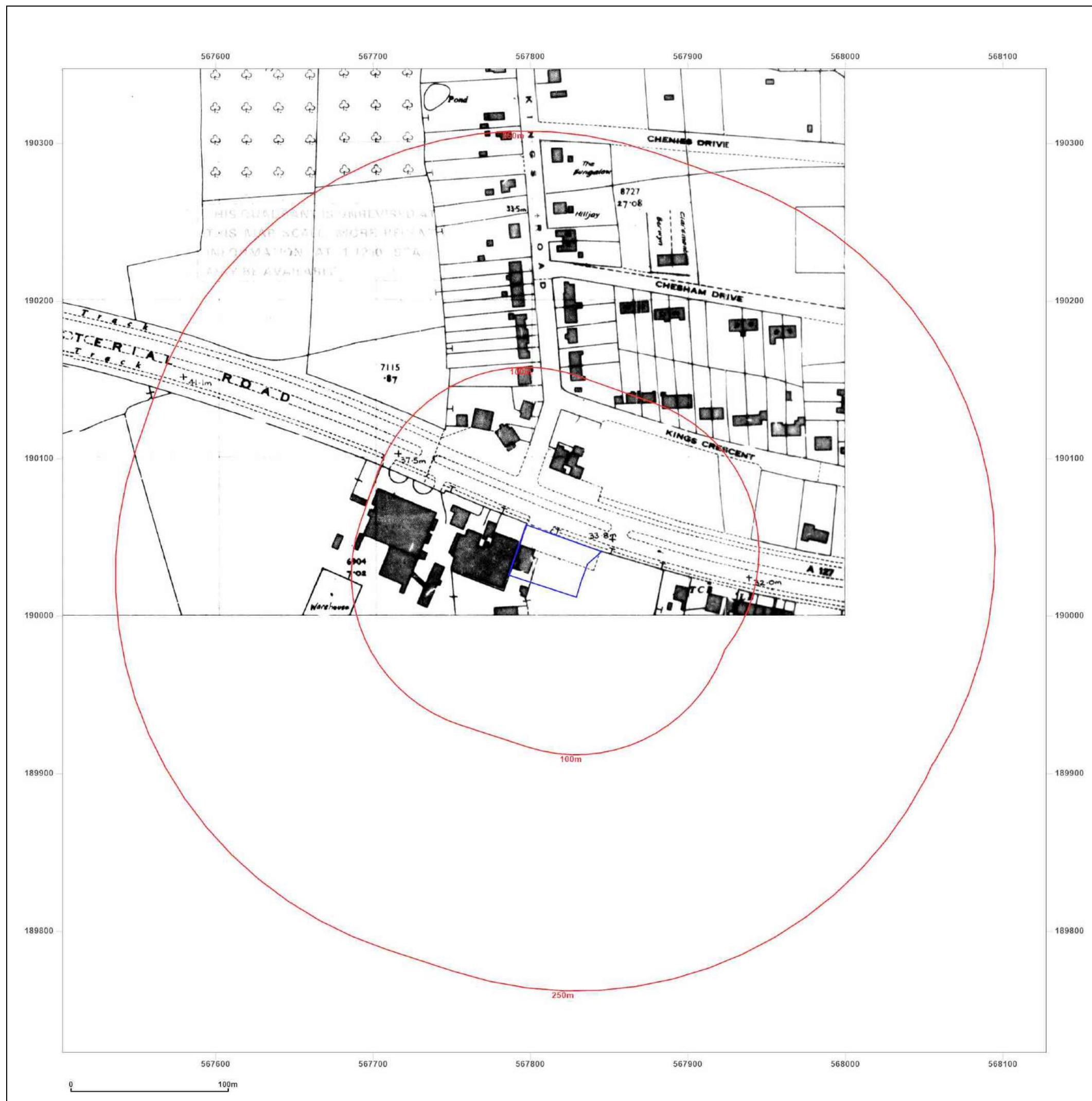


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Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1987-1990

Scale: 1:1,250

Printed at: 1:2,000



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Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

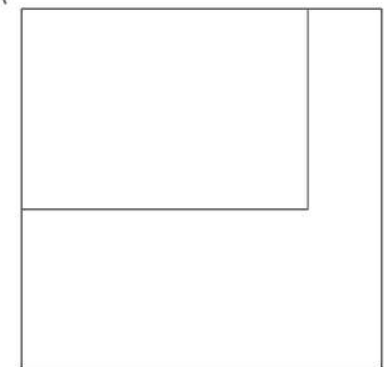
Map date: 1990

Scale: 1:2,500

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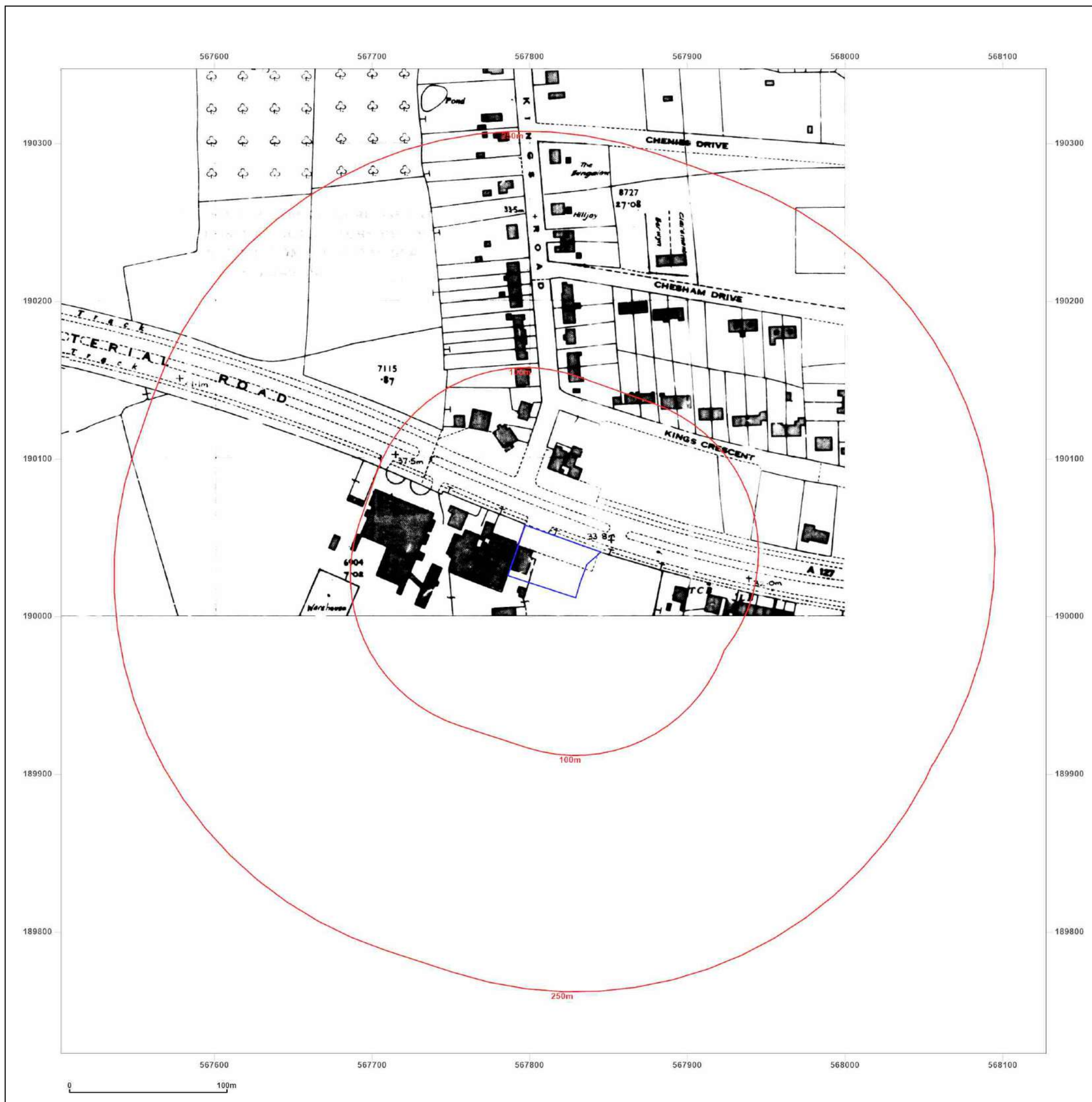


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Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1989-1993

Scale: 1:1,250

Printed at: 1:2,000



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Surveied N/A Revised N/A Edition N/A Copyright 1992 Levelled N/A	Surveied N/A Revised N/A Edition N/A Copyright 1992 Levelled N/A



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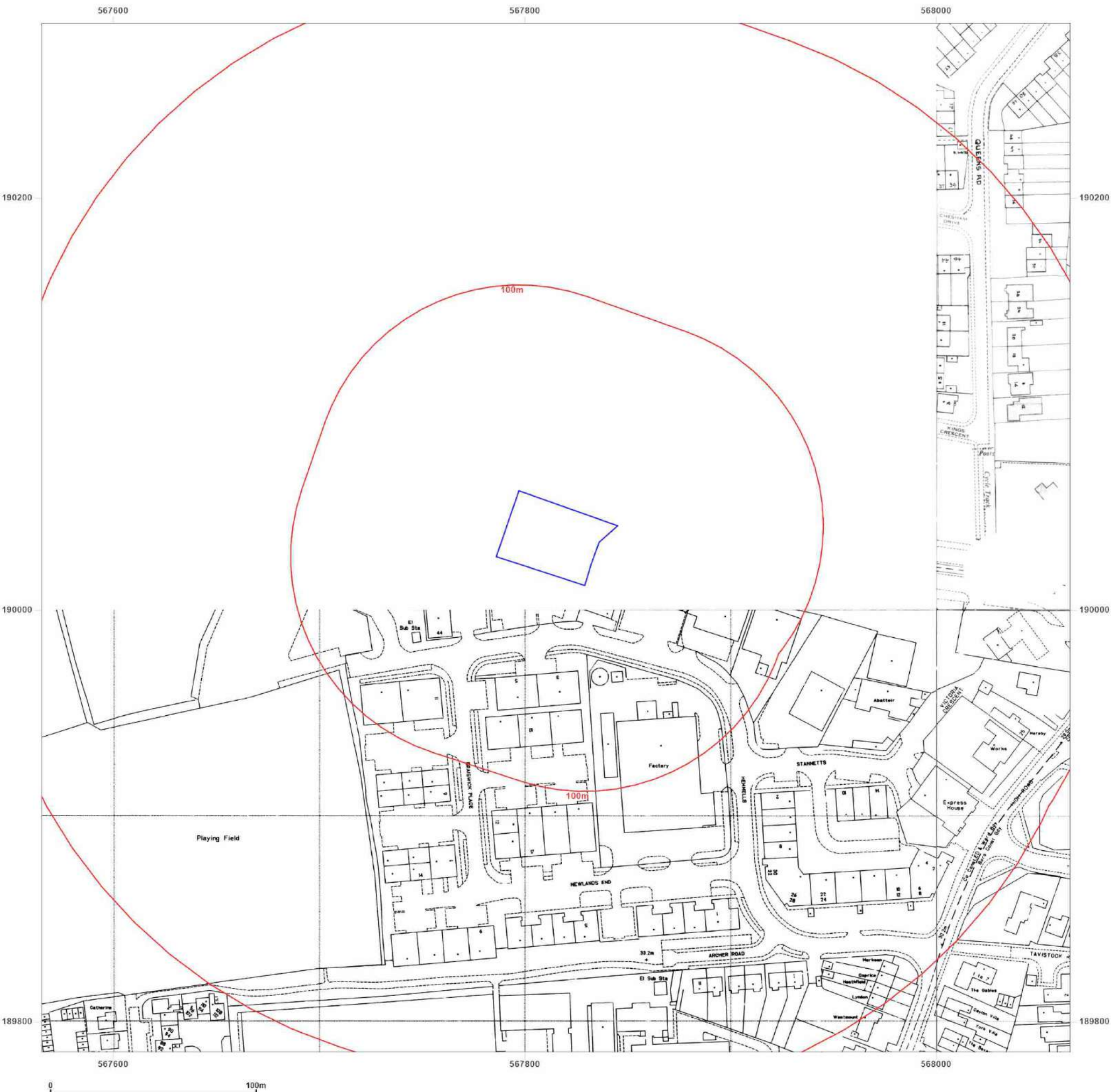
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Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1990-1995

Scale: 1:1,250

Printed at: 1:2,000



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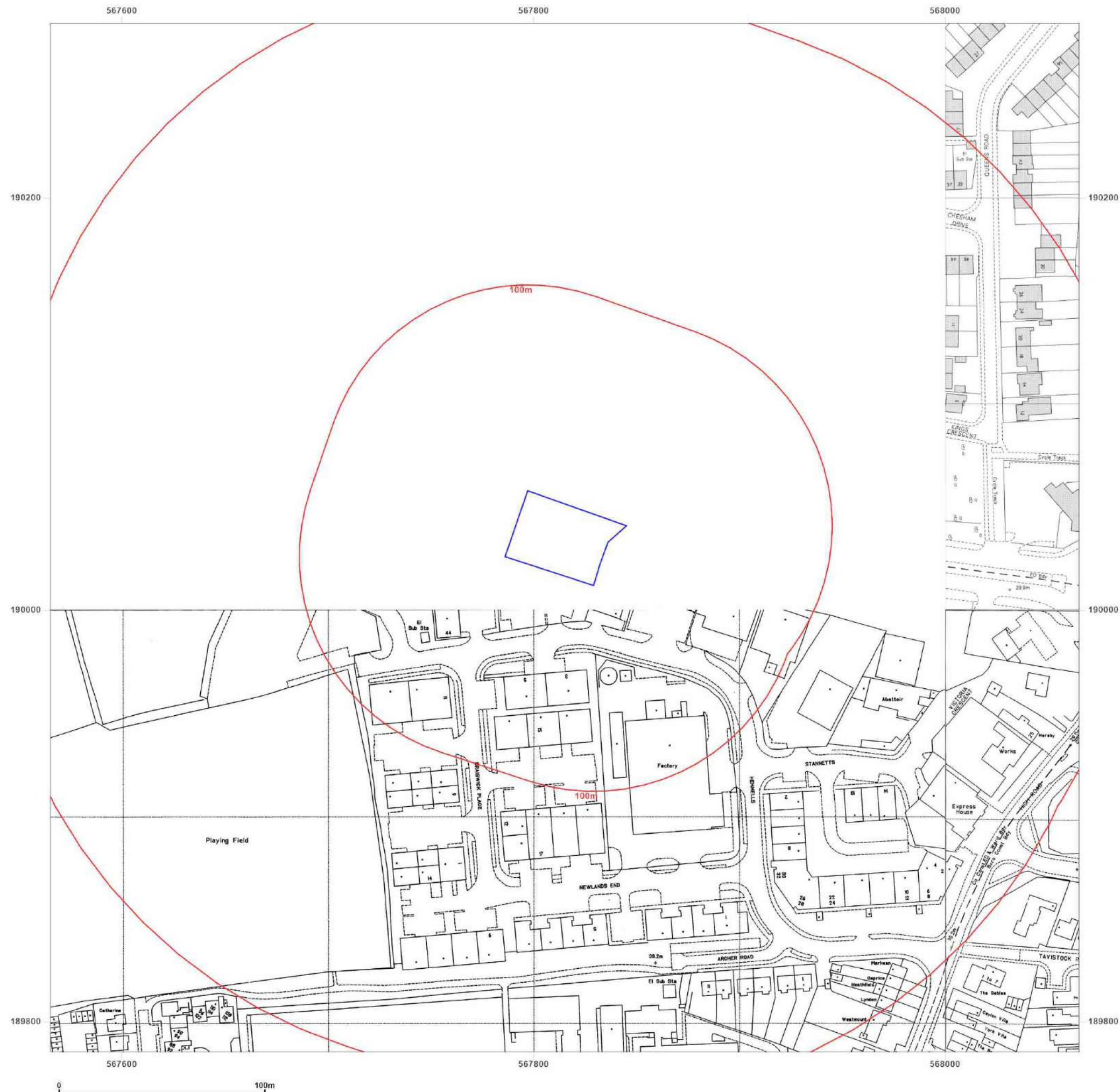
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Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: National Grid

Map date: 1992-1995

Scale: 1:1,250

Printed at: 1:2,000



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Surveyed N/A Revised N/A Edition N/A Copyright N/A Levelled N/A	



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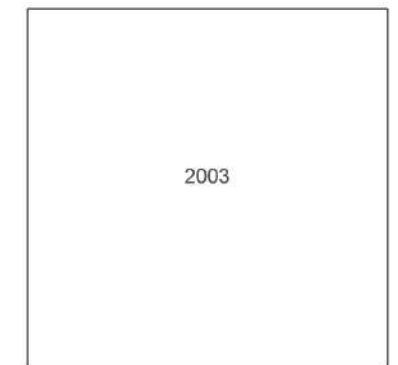
Client Ref: EMS_758710_982617
Report Ref: EMS-758710_982617
Grid Ref: 567815, 190035

Map Name: LandLine

Map date: 2003

Scale: 1:1,250

Printed at: 1:1,250



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